REMARKS

In the Official Action, the Examiner rejected claims 1-40. As set forth above, claims 1-6, 8, 10, 11, 13, 17, 21, 28, 30, and 36 have been amended, and new claims 41-55 have been added. Accordingly, claims 1-55 now are pending. Favorable reconsideration of the application as amended is respectfully requested.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1-6, 8-24, and 26-40 under 35 U.S.C. § 103(a) as being unpatentable over the Kikinis reference (U.S. Patent No. 5,522,089) in view of the Goodrich reference (U.S. Patent No. 5,375,076). Specifically, the Examiner stated:

> As to claims 1-4, 11, 13, 21, 30 and 35-40, Kikinis et al teach a portable computer system (see figure 5) comprising battery connector (15) (see figure 3, 6 and column 6, lines 55-65); a portable base computer (172) having a wireless receiver (see figures 5, column 1, lines 49-58; column 5, lines 36-40 and column 17, lines 6-10); a processor (24) having a data input operatively connected o the wireless receiver and having a power input (see figures 5-6; column 3, lines 41-44 and column 10, lines 59-66); mass storage (28 or 62)(see figures 5-6; column 10, lines 59-66) and a wireless transmitter (see column 1, lines 49-58; column 5, lines 36-40 and column 17, lines 6-10); and a portable user interface module (10) having a wireless receiver (94) see figures 1A, 1B, 13; column 1, lines 49-58; column 16, lines 60-68; column 17, lines 1-10 and column 18, lines 32-36); a display (25) for displaying information having a data input connected to the wireless receiver (94) and having a power input connected to one of the battery connectors (15)(see figures 1A, 1B, 3, 6, 13; column 7, lines 41-50; column 1, lines 49-58; column 16, lines 60-68; column 17, lines 1-10 and column 18, lines 32-36); a user interface device (16)(see figures 1A, 1B, 3 and column 7, lines 46-50) and a wireless transmitter (94)(see figure 13;

column 1, lines 49-58; column 16, lines 60-68 and column 17, lines 1-10).

Kikinis et al fail to disclose a processor connected to a battery.

Goodrich et al teach a processor (portable computer) connected to a battery (see column 1, lines 13-21). It would have been obvious to have modified Kikinis et al with the teaching of Goodrich et al, since a battery can be easily removed for periodic replacement (see Kikinis's column 6, lines 64-65).

As to claims 2, 14, 22, 33 and 37, Kikinis et al teach a portable computer system comprising a mechanical connector to hold the base computer (172) in contact with the user interface module (10)(see figures 1A, 5, 6; column 5, lines 1-40).

As to claims 3, 15, 23, 33 and 37, Kikinis et al teach a portable computer system comprising an electrical connector (105) for electrically connecting the base computer (172) to the user interface module (10)(see figures 1A, 5, 6; column 5, lines 1-40; column 9, lines 40-43 and column 11, lines 3-40).

As to claims 4 and 16, Kikinis et al teach an electrical connector (14) to bypass the wireless transmitters and receivers (94)(see figures 5, 6, 13; column 11, lines 3-9 and column 16, lines 60-64).

As to claims 5, 9, 17, 27 and 28, Kikinis et al teach the user interface module (10) can display a pointing device (18) and a window (72)(see figures 1B, 4; column 5, lines 54-63 and column 8, lines 13-68).

As to claims 6 and 18, Kikinis et al teach a portable computer system comprising a local area network (see column 17, lines 6-10).

As to claims 8 and 26, Kikinis et al. teach a portable computer comprising a keyboard (see figure 4; column 8, lines 25-42 and column 19, lines 56-64).

As to claims 10, 19, 29, 32 and 34, it would have been obvious to have the user interface device (10) with the

> same size as portable base computer (172) since such a modification would have involved a mere change in the size of a component. A change size is generally recognized as being within the level of ordinary skill in the art In re Rose, 105 USPQ 237(CCPA 1955).
>
> As to claims 12, 20 and 21 Kikinis et al. teach a user interface module comprising obstacle-tolerant wireless transmitter and receiver (IR communication)(see figure 13; column 1, lines 49-58 and column 17, lines 6-10).
>
> As to claim 31, Goodrich et al. teach a portable user interface is about nine pounds (see column 1, lines 20-23).

The Examiner's rejections are respectfully traversed. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). To establish a *prima facie* case, the Examiner must show that the combination includes all of the claimed elements and, also, must present a convincing line of reasoning as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

It is respectfully submitted that none of the references of record, alone or in any combination, teach, disclose, or suggest all of the elements recited in the amended claims as is required to establish a *prima facie* case of obviousness. The main reference relied upon by the Examiner in formulating the rejections is the Kikinis reference, which discloses a personal digital assistant (PDA) that may be docked with a host general-purpose computer. The PDA includes a local CPU, memory, and display and, thus, is

capable of functioning as a stand-alone, mini-computer that can process applications stored in its memory.

The secondary reference, Goodrich, discloses a combined notepad and notebook computer system. The system includes a main unit which houses the display, drives, and other electronics of a computer. The display functions as the display device in both the notepad mode of operation and the notebook computer mode of operation. The display, when used with a stylus, also functions as the input device in the notepad mode. In the notebook mode, the input device is provided by a keyboard that is detachable from the main unit.

The Kikinis reference and the Goodrich reference, either alone or in combination, do not teach, disclose, or suggest all of the elements recited in each of independent claims 1, 13, 21, 30, or 36. Turning first to independent claim 1, it recites a portable computer system comprising a portable base computer and a processor-less portable user interface module that is detachably coupleable to the base computer. The base computer comprises a first wireless receiver, a first wireless transmitter, and a processor. The processor-less user interface module comprises a second wireless receiver, a second wireless transmitter, a display, and a user input device.

In contrast to the system recited in claim 1, the Kikinis reference does not teach, disclose, or suggest a *processor-less* user interface module having a display and a user input device. Instead, the Kikinis reference discloses a system having a host computer

and a portable PDA, each of which includes a processor. Thus, each of the host computer and the PDA may process applications independently of each other. Indeed, neither the host computer nor the portable PDA could function for its intended purpose (i.e., a computing device) if it did not include a processor.

The Goodrich reference does not compensate for the deficiencies of the Kikinis reference. The only unit disclosed in the Goodrich reference, which functions as either a notepad or a notebook computer, includes an integral display *and* a processor. Thus, the Goodrich reference does not teach, disclose, or suggest any type of user interface device that includes a display, but does *not* include a processor, as recited in claim 1.

Based on the foregoing, it is submitted that the Kikinis and Goodrich combination does not render claim 1 obvious because the combination does not teach, disclose, or suggest all of the elements recited in claim 1. Accordingly, withdrawal of the rejection of claim 1, and claims 2-6, 8-12, and 39-40 which depend therefrom, is respectfully requested.

Turning next to independent claim 13, it recites a portable base computer system for use with a mobile user interface module that comprises, among other elements, a display and a user input device. The portable base computer system comprises a processor that executes an application program and generates results therefrom, a wireless receiver, a wireless transmitter, and a housing. Claim 13 further recites that the

portable base computer system does *not* comprise a display device to display graphical information based on the results generated by the processor.

In contrast to the portable base computer recited in claim 13, the base computer disclosed in the Kikinis reference includes a display device. Thus, unlike the base computer recited in claim 13, the base computer disclosed in the Kikinis reference has an integral display that is capable of displaying information that may result from execution of an application program. The Goodrich reference does nothing to compensate for the deficiencies of the Kikinis reference, because the Goodrich reference also does not teach, disclose, or suggest any type of base computer that does not include a display device. Like the Kikinis reference, the Goodrich reference also discloses an integral display as part of its base computer.

Based on the foregoing, it is submitted that the Kikinis and Goodrich combination does not teach, disclose, or suggest all of the limitations of the portable base computer system recited in independent claim 13, or in claims 14-20 which are based on claim 13. Accordingly, withdrawal of the rejection of claims 13-20 is respectfully requested.

The Examiner also rejected independent claim 21 in view of the Kikinis/Goodrich combination. Claim 21 recites a user interface module for use with a portable base computer system that includes a processor to execute an application program. The user interface module comprises a wireless receiver, a two-dimensional display, a user input

device, a wireless transmitter, and a docking connector. Claim 21 further recites that the user interface module does *not* comprise a processor to execute an application program.

As discussed above with respect to independent claim 1, neither the Kikinis reference nor the Goodrich reference, alone or in combination, teaches, discloses, or suggests a user interface module that does not include a processor to execute an application program. Likewise, claim 21 limits the user interface module to not including a processor and, thus, also is not obvious in view of the Kikinis/Goodrich combination. Accordingly, withdrawal of the rejection of claim 21, and claims 22-24 and 26-29 which are based thereon, is respectfully requested.

Turning next to independent claim 30, it recites a portable computer system that comprises portable means for processing application programs, first wireless communication means, second wireless communication means, and portable user interface means. The first wireless communication means transmits results from the portable means for processing to the second wireless communication means. The second wireless communication means transmits user interface signals to the first wireless communication means, which relays the received signals to the portable means for processing. The portable user interface means responds to the results by displaying graphical user constructs on a screen. The portable user interface means comprises a first user input device to generate the user interface signals. The portable means for process does *not* comprise a second user interface device to generate user interface signals.

Neither the Kikinis reference nor the Goodrich reference, alone or in combination, teaches, discloses, or suggests a system that comprises a portable means for processing which does not include a user interface device. Instead, in the system disclosed in the Kikinis reference, the host computer includes a first user input device (i.e., a keyboard) and the PDA includes a second user input device (i.e., a keyboard, a thumbwheel, a touch screen display), such that each of the two units is fully functional independently of the other unit.

Likewise, the Goodrich reference does not disclose a portable means for processing that does not include a user input device. When the Goodrich system is used in the notepad mode, the display of the processing unit functions as the input device. To use the system in the notebook mode, a user input device (i.e., a keyboard) must be coupled to the main processing unit.

Based on the foregoing, it is submitted that the Kikinis/Goodrich combination does not teach, disclose, or suggest all of the limitations recited in independent claim 30 as required to establish a *prima facie* case of obviousness. Accordingly, withdrawal of the rejection of claim 30, and claims 31-35 which depend therefrom, is respectfully requested.

Independent claim 36 also was rejected in view of the Kikinis/Goodrich combination. Claim 36 recites a computing method comprising the steps of processing application programs on a base computer at a first location, communicating results from

the application program to a user interface module remote from the base computer, and displaying the results on a screen of the user interface module. The user interface module also includes a portable user input device. The method further comprises transporting the base computer and the user interface module to a second location, processing application programs on the base computer at the second location, communicating results from the programs to the user interface module, and displaying the results on the user interface module's screen.

Claim 36 further recites that, at the first location, where the user interface module is disposed remote from the base computer, the step of processing the application programs on the base computer is performed in response *only to user input signals generated via the portable user interface of the user interface module.* Likewise, at the second location at which the base computer and the user interface module are transported together, the step of processing is performed in response *only to user input signals generated by the portable user input device of the user interface module.*

In contrast, in the system disclosed in the Kikinis reference, when the PDA is both remote from the host computer and docked to the host computer, the host computer may process application programs in response to user input signals generated by the *host computer keyboard.* Thus, unlike the system recited in claim 36, the act of processing application programs by the Kikinis host computer is not limited to processing application programs in the host computer in response *only* to user input signals generated by a portable user input device of the user interface module. The Goodrich

reference does not compensate for the deficiencies of the Kikinis reference, because the Goodrich reference also does not limit the act of processing application programs in a base computer in the manner recited in claim 36.

In view of the foregoing, it is believed that the Kikinis/Goodrich combination does not teach, disclose, or suggest all of the limitations recited in independent claim 36 and, thus, is not sufficient to establish a *prima facie* of obviousness. Accordingly, withdrawal of the rejection of claim 36, and claims 37-38 which depend therefrom, is respectfully requested.

The Examiner rejected claims 7 and 25 under 35 U.S.C. § 103(a) as being unpatentable over the Kikinis reference in view of the Goodrich reference and further in view of the Martin reference (U.S. Patent No. 5,148,155). Specifically, the Examiner stated:

> Kikinis et al. fail to disclose a portable interface device comprising a 640X480 display.
>
> Martin et al. teach a portable computer system comprising a 640X480 display for display a window, a pointing device (224) and a keyboard (222) with letter and ten decimal keys (see figures 1, 10, 11; column 5, lines 31-36; column 33, lines 28-37 and column 34, lines 1-7). It would have been obvious to have modified Kikinis et al. as modified with the teaching of Martin et al., since Kikinis et al. have been disclosed a display resolution could be changed (see column 8, lines 2-8).

The Examiner's rejection is respectfully traversed because the Kikinis/Goodrich/Martin combination does not teach, disclose, or suggest all of the

elements recited in claims 7 and 25. With respect to claim 7, it depends from claim 1 and thus is believed to be patentably distinguishable over the Kikinis and Goodrich references for the same reasons expressed above for claim 1. The Martin reference does not compensate for the deficiencies of the Kikinis and Goodrich references because the Martin reference also does not disclose or suggest a processor-less portable user interface device having a display and a user input device, where the processor-less user interface device is detachably coupleable to a portable base computer. In view of the foregoing, withdrawal of the rejection of claim 7 is respectfully requested.

With respect to claim 25, it depends from claim 21 and thus is believed to be patentably distinguishable over the Kikinis/Goodrich combination for the reasons expressed above for claim 21. The Martin reference does not compensate for the deficiencies of the Kikinis and Goodrich references because the Martin reference also does not teach, disclose, or suggest a user interface module for use with a portable base computer, where the user interface comprises a display and a user input device, but does not comprise a processor to execute an application program. In view of the foregoing, withdrawal of the rejection of claim 25 is respectfully requested.

New Claims

New claims 41-55 have been added. It is believed that the new claims are fully supported by the specification and that the Examiner will find the new claims to be patentable over the references of record for substantially the same reasons discussed above with respect to claims 1-40.

Conclusion

In view of the above remarks and amendments set forth above, Applicant respectfully requests allowance of claims 1-55. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

General Authorization for Extensions of Time; Payment of Fees Owed

In accordance with 37 C.F.R. § 1.136, Applicant hereby provides a general authorization to treat this and any future reply requiring an extension of time as incorporating a request therefor. Furthermore, Applicant authorizes the Commissioner to charge the appropriate fee for any extension of time, or any other fee which currently may be owed, **including the fee of $510.00 for the 15 additional claims (of which 3 claims are additional independent claims)**, to the credit card list on the attached form PTO-2038. However, if the PTO-2038 is missing, or the amount listed thereon is insufficient, or if the amount is unable to be charged to the credit card for any other reason, the Commissioner is authorized to charge the amount owed to Deposit Account No. 06-1315; Order No. COMP:0060/FLE (PD-25744).

Respectfully submitted,

Date: May 1, 2001

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Please amend claims 1-6, 8, 10, 11, 13, 17, 21, 28, 30, and 36 as follows:

1 (Twice Amended). A portable computer system, comprising:

a portable base computer comprising:

a first wireless receiver,

a processor having a data input operatively connected to the first wireless receiver, and

a first wireless transmitter operatively connected to the processor, and

a processor-less portable user interface module being detachably coupleable to the portable base computer, the portable user interface module comprising:

a second wireless receiver,

a two-dimensional display having a data input operatively connected to the second wireless receiver of the portable user interface module,

a user input device, and

a second wireless transmitter operatively connected to the user input device.

2 (Twice Amended). The portable computer system of claim 1 comprising a mechanical connector operative to hold the base computer in contact with the processor-less user interface module.

3 (Twice Amended). The portable computer system of claim 1 comprising an electrical connector operative to electrically connect the base computer to the processor-less user interface module.

4 (Twice Amended). The portable computer system of claim 3 wherein the electrical connector comprises bypass contacts operative to bypass the wireless transmitters and receivers of the base computer and the processor-less user interface module.

5 (Twice Amended). The portable computer system of claim 1 wherein the base computer comprises a display primitive generator operatively connected between the

processor and the wireless transmitter of the base computer, and wherein the display primitive generator is operative to send display primitives to the processor-less user interface module that are capable of displaying a pointing-device-driven, general-purpose, window-based operating system screen on the display of the processor-less user interface module.

6. (Twice Amended). The portable computer system of claim 1 comprising at least a portion of a local area network operatively connected between the processor and the display, and wherein the base computer system is operative to communicate with the processor-less user interface module using packet traffic on the local area network.

8 (Twice Amended). The portable computer system of claim 1 wherein the processor-less user interface device comprises a keyboard that comprises separate keys for all of the letters of the alphabet and the ten decimal digits.

10 (Twice Amended). The portable computer system of claim 1 wherein the portable base computer comprises a rectangular housing for supporting its processor, receiver and transmitter, wherein the processor-less user interface module [further includes] comprises a rectangular housing for supporting its display device, user input device, receiver and transmitter, and wherein one of the two largest faces of the housing

of the base computer is of substantially the same size and shape as one of the two largest faces of the housing of the processor-less user interface module.

11 (Twice Amended). The portable computer system of claim 1 wherein the portable base computer system comprises at least one battery connector that is operatively connected to the processor and wherein the processor-less user interface module includes at least one battery connector operatively connected to the display.

13 (Twice Amended). A portable base computer system for use with a mobile user interface module that comprises a two-dimensional display, a first wireless receiver, a first wireless transmitter, a user input device, and a housing, the portable base computer comprising:

a second wireless receiver constructed and adapted to communicate with the first wireless transmitter of the user interface module,

a processor responsive to commands received from the second wireless receiver, the processor configured to execute an application program and generate results therefrom,

a second wireless transmitter responsive to the processor and constructed and adapted to communicate with the wireless receiver of the user interface module, and

a housing for holding the processor, the second wireless receiver, and the second wireless transmitter,

wherein the portable base computer system does not comprise a display device operatively connected to the processor to display graphical information based on the results generated by the processor.

17 (Twice Amended). The portable base computer system of claim 13 wherein the portable base computer system comprises a display primitive generator to which the wireless transmitter of the base computer system is responsive to send [the] display primitives to the user interface module, and wherein the display primitive generator is operative to send display primitives to display the graphical information [that are capable of displaying a pointing-device-driven, general-purpose, window-based operating system screen] on the display of the user interface module.

21 (Twice Amended). A user interface module for use with a portable base computer system that [includes] comprises a processor to execute an application program,

an obstacle-tolerant wireless transmitter, an obstacle-tolerant wireless receiver, and a housing bearing at least one docking connector, the user interface module comprising:

an obstacle-tolerant wireless receiver constructed and adapted to communicate with the wireless transmitter of the portable base computer system,

a two-dimensional display responsive to the wireless receiver,

a user input device,

an obstacle-tolerant wireless transmitter responsive to the user input device, and being constructed and adapted to communicate with the wireless receiver to the portable base computer system, and

at least one docking connector constructed and adapted to mate directly to the connector of the portable base computer system,

wherein the user interface module does not comprise a processor to execute an application program.

28 (Twice Amended). The user interface module of claim 21 wherein the user interface module comprises a display primitive decoder responsive to display primitives

received solely from the base computer system [to display a pointing-device-driven, general-purpose, window-based operation system screen] on the display.

30 (Twice Amended). A portable computer system, comprising:

portable means for processing application programs at a first location in response to user interface signals, the means for processing being readily transportable in hand luggage,

first wireless communication means for transmitting results from the portable means for processing, and the first wireless communications means for relaying received user interface signals to the portable means for processing,

second wireless communication means for receiving the results from the first communication means and for transmitting the user interface signals to the first wireless communication means, and

portable user interface means responsive to the results received by the second wireless communication means to display graphical user interface constructs on a two-dimensional screen, wherein the portable user interface means comprises a first user input device to generate user

interface signals, and wherein the portable means for processing does not comprise a second user input device to generate user interface signals.

36 (Twice Amended). A computing method, comprising the steps of:

processing application programs in a base computer system at a first location,

communicating results from the application programs by a wireless communication method to a user interface module comprising a portable user input device, the user interface module being disposed remote from the base computer system,

displaying results of the step of communication on a screen of the user interface module,

together transporting the base computer system and the user interface module to a second location,

processing application programs in the base station at the second location,

again communicating results from the application programs to the user interface module, and

displaying results of the step of again communicating on a screen of the user interface module,

wherein, at both the first location and the second location, the steps of processing application programs in the base station are performed in response only to user input signals generated via the portable user input device.

Please add new claims 41-55 as follows:

41 (New). A portable computer system, comprising:

a base unit;

a portable user interface module detachably coupleable to the base unit, the portable user interface module comprising a user input device and a display device; and

only one processor responsive to user input signals input from the user input device,

wherein the only one processor is disposed within the base unit and is configured to respond to the user input signals input from the user input device regardless of whether the base unit is coupled to the portable user interface module or detached from the portable user interface module.

42 (New). The portable computer system as recited in claim 41, wherein the user input device is the only user input device.

43 (New). The portable computer system as recited in claim 41, wherein the display device is the only display device, wherein the processor is configured to execute program code and produce results therefrom, and wherein the display device is configured to display visible indicia corresponding to the results regardless of whether the base unit is coupled to the portable user interface module or is detached from the portable user interface module.

44 (New). The computer system as recited in claim 41, wherein the base unit comprises a first wireless receiver operatively coupled to the processor and a first wireless transmitter operatively coupled to the processor, and wherein the portable user interface module comprises a second wireless receiver operatively coupled to the display device and a second wireless transmitter operatively coupled to the user input device.

45 (New). A portable computer system, comprising:

a base unit comprising a processor to execute an application program and to produce results therefrom;

only one display device to display visible indicia based on the results produced by the processor; and

a portable user interface module detachably coupleable to the base unit, the portable user interface module comprising the only one display device,

wherein the only one display device displays the visible indicia regardless of whether the base unit is coupled to the portable user interface module or is detached from the portable user interface module.

46 (New). The portable computer system as recited in claim 45, wherein the portable user interface module comprises a user input device

47 (New). The portable computer system as recited in claim 46, wherein the user input device is the only user input device, and wherein the processor is configured to respond only to user input signals input via the only user input device regardless of whether the base unit is coupled to the portable user interface module or is detached from the portable user interface module.

48 (New). The portable computer system as recited in claim 45, wherein the display device is the only display device, wherein the processor is configured to execute program code and produce results therefrom, and wherein the display device is configured to display visible indicia corresponding to the results regardless of whether the base unit is coupled to the portable user interface module or is detached from the portable user interface module.

49 (New). The computer system as recited in claim 45, wherein the base unit comprises a first wireless receiver operatively coupled to the processor and a first wireless transmitter operatively coupled to the processor, and wherein the portable user interface module comprises a second wireless receiver operatively coupled to the display device and a second wireless transmitter operatively coupled to the user input device.

50 (New). A portable computer system, comprising:

only one user input device;

a base unit comprising a processor responsive to user input signals from the only one user input device; and

a portable user interface module detachably coupleable to the base unit, the portable user interface module comprising a display and the user input device,

wherein the processor is responsive only to user input signals that are input from the only one user input device regardless of whether the base unit is coupled to the portable user interface module or is detached from the portable user interface module.

51 (New). The portable computer system as recited in claim 50, wherein the display device is the only display device, wherein the processor is configured to execute program code and produce results therefrom, and wherein the display device is configured to display visible indicia corresponding to the results regardless of whether the base unit is coupled to the portable user interface module or is detached from the portable user interface module.

52 (New). The portable computer system as recited in claim 50, wherein the processor is the only processor.

53 (New). The computer system as recited in claim 50, wherein the base unit comprises a first wireless receiver operatively coupled to the processor and a first wireless transmitter operatively coupled to the processor, and wherein the portable user interface module comprises a second wireless receiver operatively coupled to the display device and a second wireless transmitter operatively coupled to the user input device.

54 (New). The portable base computer system of claim 17, wherein the graphical information comprises a point-device-driven, general-purpose, window-based operating system.

55 (New). The user interface module of claim 28, wherein the display primitive decoder is response to display primitives received solely from the base computer system to display a point-device-driven, general-purpose, window-based operation system screen on the display.